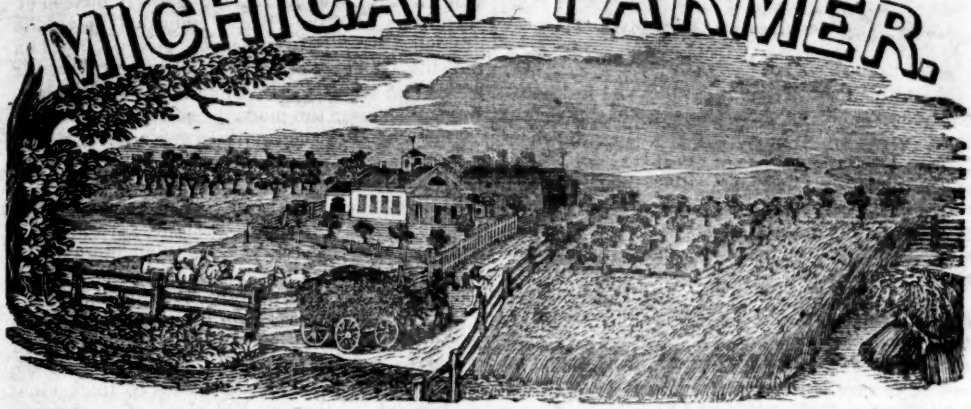
MICHIGAN FARMER.



DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC ECONOMY.

Volume IV. Jackson, July, 1846. Number 4.

PUBLISHED MONTHLY.

H. HURLBUT, EDITOR.

[For Terms see last page.]

Wheat and Clover among Corn.

In our last volume, we mentioned that a farmer of this County had tried with entire success, the experiment of sowing clover seed in a corn-field. He sowed the seed immediately before going through his corn for the last time, and then followed with the cultivator. The clover grew finely, so that by the time the corn was harvested, it covered the ground and was up ankle high.

The same experiment, we learn, was made last year with wheat, by Mr. Harrison, of Lenawee County, the inventor of the cultivator mentioned by a correspondent in this number. A field of sixty acres of thrifty corn was sown with wheat, which was *cultivated* in. Late in the fall, the corn was taken off, the wheat covering the ground at the time handsomely. We understand that the crop of wheat is very promising, comparing favorably with others which had a regular summer fallowing, and that no one could infer from the appearance of the field, the manner in which it was got in. An observing farmer informs us that he has remarked that wheat sown after corn, and got in seasonably, turns out better crops, especially on rich lands, than after a naked fallow.—There is a diminished growth of straw, but this is brighter, the head better filled, the kernel plumper. We think we see a reason for this, in the exhaustion of some vegetable matter by the corn crop, and in the very different constituents of the corn and wheat kernel, which would make the latter a very proper crop to succeed the former.—The objection to this course has usually been, that by the time the corn is harvested, and the ground prepared for the wheat, the season is too far advanced. Hence, this course cannot well be pursued on an extensive scale.

But the plan of sowing wheat among corn, obviates this objection. The only additional ones that appear to present themselves are, the difficulty of sowing the seed, (which must be done in every interval between the rows separately,) and the damage to the wheat incurred during the harvesting and drawing off of the corn crop. The latter would probably not be serious. The difficulty of sowing the seed might be diminished by having the rows of corn north and south, a wide distance apart, say 5 feet, while in the other direction, they shall only be far enough to admit the passage of the cultivator between them.

When we consider the great saving of labor which such a system of management produces, and the profitable crop obtained as a substitution for the naked fallow, it must be admitted there are great advantages. It may be thought that there will be too great an exhaustion of the land; but it is to be remembered as one of the maxims of improved husbandry, that with a proper rotation of crops, and a proper husbandry and application of manures, *no field ever need lie fallow in order to preserve or restore its fertility.* It seems well ascertained that there is injury as well as benefit in the exposure of a bare soil to the sun, wind and rains of summer, and that it is thus exhausted of some valuable properties while it acquires others. We think it not improbable that the benefit of the shade of the corn-field may be nearly a recompense for the ingredients taken up by the crop.

As to stocking down a corn-field with clover, this plant will vegetate just as much more thriftily than it would among oats, wheat or barley, as a weed does. A thrifty growth of oats, wheat &c, it is well known, will effectually choke down weeds—so it will clover; and it is not till these crops are matured and removed that the clover exhibits any considerable vigor of growth. The advantage whether with plant or animal, of having a vigorous unchecked growth from the start, need not be insisted on.

The method above spoken of applies of course, only to the *level* culture of corn.

For the Michigan Farmer.

The Commentator, No. 2.

MAY NUMBER.

"THE WHEAT CROP." The wheat in this vicinity looks uncommonly well—far better than it did a year ago. If our greatest enemy in wheat growing, the rust, does not affect it, the prospect is of an abundant harvest. The frequent warm showers also have brought forward spring crops, such as barley, oats, spring wheat; all of which show a fine thrifty broad leaf, and bid fair to produce great crops.

"KILLING CANADA THISTLES." I would just suggest one method of destroying them, which, I think better than deep plowing, or the one recommended by E. M., or at least more practicable if not more sure. For if the "patches" were extended over whole fields as I have seen in some of the eastern states, there would be plenty of business for the "small machine" recommended by E. M. The plan I propose is simply to take a sythe and cut them down when they are in full bloom just before, or during a rain, as the water falling fills the hollow of the stubble and renders the cutting more deadly. A few years cutting in this manner will entirely exterminate them. I have seen whole farms on which were acres half covered with them, entirely rid of them by this means.

"SAVING FRUIT FROM THE FROST." If the plan of Mr. Leland will succeed with such frosts as we had here last season in May, the information is worth to any man having but one appletree of size to bear, a year's subscription to the Michigan Farmer. I must say that I have some doubts, but as nothing can be lost by the trial, and something gained from the manure to the tree, I have given it the trial.

The plan of sowing clover seed, as recommended in the article from the Ohio Cultivator, is the correct one, as I have repeatedly proven by experience; only I would recommend that the roller be passed over the ground after the harrowing is completed. This not only facilitates the germination of the clover seed, but is a benefit to the grain crop. No man who cultivates a farm of light sandy land, should be without a roller.

"MANAGEMENT OF TIMBER LANDS." Your correspondent cannot receive better directions than those given by yourself. Not only all you have said in relation to it "is so," but the land is benefitted by it as much as it would be with the timber cut and cleared off green, and a heavy dressing of manure given it. The next best method is what the back-woodsman calls "slashing."—This is done by falling the timber into "windrows," as much as may be without cutting off the limbs. After lying about three years, fire is set to it in a dry time, and the brush, small stuff, and much of the timber will burn. The remainder tumbled together without much chopping by the help of a team, can be burned without much trouble. By ether of these methods, land can be cleared with a small share of the expense that it can in the ordinary way, and as much gained in the improvement of the land as in the expense of clearing.

"CURING CLOVER." The plan suggested in this article appears very reasonable and is worth putting in practice. The same plan might be adopted with hay put in the barn, if instead of putting it into the "bay" immediately on the ground, it were put on sleepers placed across on the sills. I have often practiced a plan similar with grain which I feared might not be fully dry. In commencing the mow, place an empty barrel on the bottom, packing the grain closely around it; as the mow is raised, raise up the barrel until the mow is completed. In this way, a space of the size of the barrel is left through the centre of the mow for a current of air and the steam of the damp grain to pass off. By this plan, grain in wet seasons and difficult weather, is prevented from heating in the mow which could not otherwise.

A few words in relation to the preserving of agricultural papers, and aiding in extending their circulation, and I have done. The plan for the first is this. Prepare two pieces of thick stout pasteboard, of the size and shape of your paper, couple them together by pasting on a thin piece of leather on the two edges of one side for the back of the "book," leaving a space on the leather between the two edges equal to the supposed thickness of the volume when completed; punch holes through the leather at the edge of the pasteboard at the top, middle and bottom; prepare three strings, and pass one end through the side of the cover intended for the title page, fastening the other end on the outside. On the reception of each No., punch holes far enough from the back edge to hold, corresponding with the holes in the cover through which pass the strings, then through the other cover, and tie tightly on the outside, and you have your work bound. As you get the successive No's., all you have to do is, to untie the strings, pull them out of the back cover, and put in the paper as before, and all is safe.

The plan for the second is, to double if not triple the number of subscribers to the Michigan Farmer, by the solicitations and influence of each present subscriber with his neighbors—each one procuring one or more new subscribers. *It can be done*, and now the question is, *will you do it?* I pledge myself for one to the work. Recollect, brother farmers, this is not solely for the benefit of the publisher, (although he is worthy,) but for the advancement of the cause of Agriculture, and elevation of the calling. Shall it be said that Michigan, a state strictly agricultural, that ranks in its infancy as the sixth in the Union as a wheat growing state, will not support, and liberally patronize one agricultural paper?

Kent Co., May 17th 1846. J. F. C.

For the Michigan Farmer.

The Commentator, No. 3.

JUNE NUMBER.

"INDIAN CORN FOR SOILING AND FODDER."—The suggestions contained in this article are important, and what every farmer should bear in mind. Our state is generally so newly settled, that the practice of soiling is inapplicable to us, inasmuch as our cattle procure their own subsistence during the summer by running at large on the commons. But in a densely populated country, and in and about cities and villages, it appears to be a well settled fact that the system of soiling is by far the most economical method of keeping stock. But our cattle must be supplied du-

ring the winter, and, to reap the greatest profit from them, this supply should be liberal—not barely enough to *keep the breath of life in them,* so that it will require the whole summer to recover what they have lost during the winter. To accomplish this, a sufficient quantity of good and nutritious food should be supplied. The stalks of Indian corn from which the grain is taken, if properly secured, are among the best kinds of food for cattle, sheep or horses, and when especially cultivated for that purpose, must be unsurpassed by any thing else. Then the amount, as stated, which can be grown on an acre, must give it the preference over any thing else. Another thing also in its favor, is the time for its sowing. By the first of July the light or heavy yield of the grass crop can be fully determined, and if unfavorable, the crop of corn can be resorted to. Better for a farmer to summer over ten tons of hay, than to lack one. I should give corn by far the preference over millet on many accounts for this purpose.

"Clearing Timber Land."—I should differ from your correspondents on the utility of girdling for clearing timber land. Mr. Belding's objection in regard to the danger to cattle may have some weight. As to the undergrowth, all that can be cut as easily as girdled should be cut when the girdling is done, and it is immaterial how high, as the stumps will be rotted by the time of clearing. The year before the time intended for clearing, all the undergrowth which is left, or which has sprung up, should be cut with a bush scythe, which will facilitate the burning, and will not be of sufficient size to be any "drawback upon the first crop." I think if Mr. B. should make the trial, he would find his mistake in regard to the land being in as "sour crude state as ever." I am positive that in no way can the thick forest be changed to the cultivated field so beneficially to the soil, as girdling and letting the trees die standing. The finest and largest crop of wheat I ever saw, (said to yield 60 bushels to the acre,) was on land cleared in this manner. The objection of A. M. C. that the timber will be hard to fall, is not valid if the girdling is sufficiently high to admit of cutting the tree underneath, as it will cut easier even than green timber.

"Farm Implements."—I shall feel gratified to see the enquiries of "Rusticus" answered.

"Rust in Wheat."—If some *practicable* method could be discovered to avoid this evil to the wheat grower, the discoverer would be a benefactor to his race. But our large wheat growers at the west, who raise from 50 to 500 acres each, would smile at the idea of sprinkling it over with a "plasterers' brush, or a common water pot."

"Currant Bushes."—That currant bushes need pruning, there can be no doubt; nor is there a doubt but the fruit would be greatly improved, as well as the appearance of the bush.—Gardeners, try it.

"How to winter Bees."—A plan equally good, attended with much less trouble, and in the end about as cheap as that of burying, is, to construct a substantial Bee-House, so contrived that it can be closed up tight in the fall, and so kept until the spring opens. The building should be about 7 feet wide and 7 feet in height, and of a length suited to the number of swarms intended to be put therein. One of this height will answer for two tier of hives, one above the other. It should have a good tight floor, and be lathed and plastered. Doors should be made and fitted in perfectly tight on the front side, so as to be put up in the fall for the winter, and taken down in the spring for the summer. A house of this kind may be so constructed as to be an ornament to the garden or the pleasure grounds of the mansion, while the industrious bee will furnish a luxury for the table of the owner. J. F. C.

Kent Co., Mich.

The Cultivator on Summer-fallows, &c.

☞ The following article, designed for our last number, was received too late for insertion. Articles can seldom be published which come to hand later than the 22d. It is desirable to have them by the 15th. Some of the suggestions may still be of use, and we give them to the public.

For the Michigan Farmer.

Mr. Hurlbut:—I will offer a few suggestions in reference to summer fallowing, which I think may be interesting and perhaps of utility to some of your readers; although had they been forwarded in time for your May No., they would doubtless have been more in season.

The cultivator, although not brought into general use in Michigan, at least, in the western part, I consider one of the best of implements extant for doing this part of the farmer's work expeditiously and well. By its use the ground may be put in better order, and a heavier crop secured with once plowing, than by three after the ordinary method, especially where a sward is broken up. The reason is obvious. In the common way, by the time the sod has fairly commenced rotting, it is turned back and exposed to the action of the dews, rains, and hot sun, by which its fertilizing properties are mostly dissipated. For what does not renew its partially extinguished life and growth, choking thereby the growth of the grain—dries and is left on the ground a detriment rather than a benefit to the crop. But if it remain where it is first deposited by the plow, it becomes decomposed in time to be available to the grain in its growth, and its beneficial effects will be as apparent as would those of a good dressing of compost. I consider these remarks to apply very forcibly to the prairies, and all soils to which June grass, or blue grass as it is sometimes called, is indigenous; for they are seldom without a sod at time of plowing. I think it advisable to break the ground for the application of the cultivator, an inch or so deeper than common depth, for the better security of the sod from being disturbed, and the obtaining of a greater depth of soil.—The segments irons, or teeth, if made of wrought iron, and laid with steel, would undoubtedly be the best; but cast ones I find to answer a very good purpose. The manner of constructiug the cultivator for fallow ground, could be varied to suit the team designed to work it; for two yoke of cattle, or one yoke and a horse, one made in the form of a three-cornered harrow, rather longer according to the width, of a size to contain about nine five inch teeth, would, by the application of a tongue

to keep it steady, be apt to work well; although, in soddy ground, it might incline to slide off; in which case it would be better to reverse the manner of locomotion, by turning the teeth around, removing the one from the point to the cross piece to give the sods a chance to clear, and inserting the tongue between the two extremes, at a distance from their ends that would ballance the instrument, and make it run level, which, upon the whole, though rather unique, I consider the better way.

Perhaps some of your correspondents can suggest a method that would be preferable to this; if so, I should be very happy to profit thereby.

Superadded to the advantage of a larger crop, by the use of the cultivator, will be that of the better order in which the ground will be left for a subsequent plowing, besides the very agreeable consideration of a smooth surface on which to work while securing the crop.

The Young Farmer of L. P. R. Mich.

May 20th, 1846.

For the Michigan Farmer.

Home-made Guano.

Mr. Editor:—While merchants are sending their ships to Africa and South America for Guano, and farmers are paying such heavy prices for it, it seems to me that very many of them are overlooking a manure of nearly the same nature, and of great value, which is continually left to accumulate in their henroosts. This manure, which is sometimes allowed to accumulate to the depth of 18 inches or 2 feet, would be nearly as valuable as guano, and probably more profitable, and it is surprising that farmers are not aware of its value.

It must not, however, be applied too liberally; for like all highly concentrated manures, if too much be used on a given space, it will prevent vegetation. I think the best way to apply it would be in a compost. Let 3 or 4 times its bulk of marsh muck be mixed with it, then spread it on land that has been plowed, and harrow it in immediately, and it will be found a highly valuable manure.

N. H.

From the Farmers' Cabinet.

Preparation of Seed Wheat.

Mr. Editor:—I have noticed several communications in your valuable paper, upon the preparation of seed wheat; as they all differ somewhat from the method I have adopted for the last three years with much success, I beg leave to give you my mode of preparation.

I place a half hogshead nearly full of water in my barn—add glauber saults until the water ceases to dissolve them; then take a half bushel of wheat in a bale basket, sink it gradually, stirring it with a paddle until every particle of filth is washed out, which will float on the brine; raise the basket suddenly to throw off the filth, let the brine drain from it, place the wheat on the floor and roll it in newly slacked lime, then run it aside to let it dry a few hours before seeding—skim the floating filth from the brine and strain it through a colander or fine sieve. By this mode one hand can wash as fast as ten ploughs can put it in.

In 1843, I received 100 bushels of seed wheat from the Western shore; after seeding more than one half I discovered smut in it, and prepared 30 bushels as stated, washing out a quantity of smut and other filth. In 1844 I found the smut much increased in the wheat not prepared; in that prepared, after a careful examination, I found only one smut head; I then examined the grain, and thought I could see a perceptible difference in favor of the prepared wheat.

In the fall I seeded 75 bushels of that wheat, washing only 12 bushels. In 1845 I examined carefully the 12 bushels seeding, and found no smut; I did not examine that not prepared, but found none in cleansing it for market. I again compared the grain, and observed if any thing, a greater difference in favor of the prepared wheat. I also discovered a like difference in a white wheat that I was seeding.

Last fall I prepared my entire crop, 162 bushels, using 200 lbs. salts, and nearly six barrels of slacked lime. I seeded two small parcels of wheat, one from Pennsylvania, the other from the southern part of this state, both containing a large portion of smut; if these prove clean the coming harvest I shall consider this preparation proof against smut. As we have discovered an antidote for this pest, I now no longer fear it, and will recommend to your subscribers in this part of the country, to change their seed wheat at least every two or three years, for I am fully satisfied from experiments I have made, that great gains will result from it.

A Subscriber.

Eastern Shore, Md., March 30, 1846.

The Cut-Worm.

This is the most troublesome worm that we have to contend with in our fields and gardens.—We think our readers generally understand what is meant by the *cut-worm*. It is of a slate color, and is often found more than an inch long. It differs from the common muck-worm, that comes from the dor-bug, being more slender and darker, and its habits are peculiar. It attacks young plants in the night only, and then it cuts them off square near the earth, and leaves them prostrate and uneaten.

It is destructive among cabbage plants and a variety of others; it fells to the earth peach and cherry trees that are an eighth of an inch in diameter, and causes much trouble to nursery men. It seems to delight in mischief, not devouring the hundredth part of the game that it has killed. It seems to suck the sap of young plants, not caring for the wood or leaf; and many of what we commonly call weeds seem as agreeable to the cut-worm as the most valuable plants. Hence some gardeners leave weeds about their favprite plants in order to feed this worm.

Before the sun or the gardener rises, the cut-worm buries himself close by the plant that he has felled, to the depth of an inch, and more; there he lies quietly till evening, when he crawls to the next plant for his next supper. If you have a nursery row of peach or cherry trees ten inches apart, and no weeds between, he will advance regularly and fell a tree each night till the trees have grown too hard for him. You will then find some of them half eaten off and left so.

One mode of destroying the cut-worm is to watch your drills early in the morning, and wher-

ever you find he has felled a tree, dig down and find him near the root. You then put him on a hoe or stone and crush him with your foot—treading on him in the dirt will not kill him. Cutting in two, or cutting off his head will answer when you have a proper implement handy.

Some guard their favorite plants by placing circular birch bark around each one, two inches high. Strips of board placed on each side of the drills will guard against such as are not fenced in with the plants.

It would be a good plan to have *burnt earth* to sow plants in that are so agreeable to the cut-worm as the young cherry and the young peach tree. It is well known that cabbage plants succeed best on ground that has had brush burnt on it. Burnt earth might be placed between strips of boards set edgwise, and not many cut-worms would trouble the gardener in this space. This may possibly be cheaper than to place a wall of birch bark, or of tin, around each plant.—*Mass. Ploughman.*

Whitewash for a Stone or Brick Building.

Take 1 bushel of unslacked lime,
½ gallon of vinegar,
8 lbs. tallow,
8 lbs. alum,
12 lbs. salt,
4 lbs. ground rice;

slack the lime with the boiling water; then, while hot from slacking, add the other ingredients, (the tallow to be melted, and the rice flower to have been dissolved in boiling water,) and stir till fully incorporated; the longer it stands the better.

Apply two coats, with a whitewash brush.

Some of the public buildings at Washington have been washed with this composition, and experience has decided it to be the most valuable of any that has ever been employed for such a purpose.—*Ex. Paper.*

To Destroy Rats.

"Melt hog's lard in a bottle plunged in water heated to about 150 deg. Fahrenheit: introduce into it half an ounce of phosphorus for every lb. of lard, then add a pint of proof spirit or whisky; cork the bottle firmly after its contents have been heated to 150 deg., taking it at the same time out of the water; agitate it smartly till the phosphorus becomes uniformly diffused, forming a milky-looking liquid. This liquid being cooled, will afford a white compound of phosphorus and lard, from which the spirit spontaneously separates, and may be poured off to be used again, for none of it enters into the combination, but it merely serves to comminute the phosphorus, and diffuses it in very fine particles through the lard. This fairy compound, on being warmed very gently may be poured out into a mixture of wheat flour and sugar, incorporated therewith, and then flavored with oil of rhodium or not, at pleasure. The flavor may be varied with oil of anniseed. This dough, being made into pellets, is to be laid into rat holes. By its luminousness in the dark it attracts their notice, and being agreeable to their palates and noses it is readily eaten, and proves certainly fatal. They soon are seen issuing from their lurking places to seek for water to quench their burning thirst and bowels, and they commonly die near the water. They continue to eat as long as it is offered to them, without being deterred by the fate of their fellows, as is known to be the case with arsenical doses."—*Selected.*

N. B. Be careful not to take the phosphorus in the fingers, as their heat is sufficient to ignite it, when it is not readily extinguished, and makes a bad burn. Ed.

What Causes Dusty Hay?

Every farmer has probably observed that sometimes, after hay has been in the barn for a time, on removing it much dust arises from it, and this, too, when it was apparently clean and dry when it was put into the mows. We have never been satisfied in regard to the cause of this.

A writer in the Massachusetts' Ploughman on the subject of making barns tight by clap-boarding or shingling them, thinks that it is injurious to make them tight, and says that the hay will become "dusty and smoky," when that kept in more open barns will remain bright and good if it is secured in good order. The Editor of the Ploughman endorses the opinion, and observes that he has known numerous instances of spoiled hay in consequence of tight loading."

Can any of our readers throw any light upon the subject? Does hay, when cut in good season, well made, and put into stacks, ever become dusty? Some attribute this dust to the hay being late cut, and to its accumulating dust from the atmosphere which adheres to the hay. If this were the case, why does not the dust show itself while getting the hay in, as plentifully as afterwards? If it be true that tight barns are actually injurious to hay, it ought to be generally known, for it would save much expense which many incur with a belief that it is best, when they would not incur the same if it is actually a damage to their fodder.—*Me. Far.*

Harrison's Cultivator.

Mr. Editor:—Please allow me, through your paper, to call the attention of the farmers of this state to Harrison's Cultivator. I am now using it on my farm, and feel bound to say that it is superior to any cultivator before invented. It is in the form somewhat of the ancient Roman plow—is very simple in its construction, but is a most admirable article for many purposes, but especially for clearing out the weeds from among corn. It weighs only about thirty pounds, and a boy and a horse will do the work of four men in a corn-field, if a common plow is used for plowing.

Jonathan Lamb.

Waterloo, June 8th, 1846.

Cure for Heaves in Horses.—A farmer informs us that he has recently cured two of his horses, which had the heaves badly, by the use of the following remedy:

To 3 quarts sweet milk, add a teaspoonful of sulphuric acid, (oil of vitriol,) and mix with the horses' feed. Give at first, three times a week, and afterwards once or twice as there may seem occasion for a few weeks longer. Our informant says there was little appearance of the heaves after the first week.

Analysis of Clover.

In the last Cultivator are contained the results of a labored analysis of red clover, made by Prof. Horsford, an American who has been for some time a student in Agricultural Chemistry, under the celebrated Liebig.

"Of the dry plant altogether, the

per cent. of ashes was	11,18 per cent.
Of the leaves,	10,69 do
Of the stems,	8,52 do

Ingredients of the Ashes.

Potash	16,101
Sodium	1,874
Soda	40,712
Lime	21,914
Magnesia	8,289
Phosphate of iron	670
Chlorine	2,856
Phosphoric acid	3,915
Sulphuric acid	1,063
Silica	2,605

It will be observed that this differs somewhat from the analysis given in Johnston's Encyclopedia. The discrepancy is widest in the quantity of soda.

According to this analysis, 1000 lbs. of dry clover hay contained of

Potash	19,95 lbs.
Soda	5,29 "
Lime	27,80 "
Magnesia	3,33 "
Alumina	14 "
Silica	3,60 "
Sulphuric acid	4,47 "
Phosphoric acid	6,57 "
Chlorine	3,62 "
Total	74,78 lbs.

Reclamation of Marsh-Meadows.

The first step in reclaiming one of our natural meadows, is of course, to produce the degree of dryness desirable, by ditching. To accomplish this, it is generally found necessary to cut marginal as well as centre ditches, in order to cut off the sources of springs, flowing in from the upland. It sometimes happens that springs rise in the interior of a marsh, fed by an under-ground channel; in which case a side ditch will be needed passing from the spring to the main ditch.

It is very possible to drain too thoroughly. If made very dry at once, before the soil has had time to settle, and while it yet retains its spongy texture, neither the native wild grass, nor the seed of cultivated grasses will grow successfully. The ditches which are necessary to carry off the surplus waters of the early spring, would, if left open through the droughts of summer, produce this excessive dryness. Hence it is well, so soon as the requisite degree of draining has been accomplished, to close up the mouths of the ditches, and prevent the further escape of the water. We refer now to marshes recently reclaimed, and which have never been brought under cultivation. After acquiring some compactness by the natural process of settling, after the superfluous waters shall have been removed, which process is accellerated by cultivation, or by the trampling of cattle when depastured, this precaution may become unnecessary.

After draining sufficiently, if it is desired to stock down with the cultivated grasses, it is only necessary to burn, (if the meadow has not been mowed,) sow the seed of timothy or red-top, or both, and scarify the turf thoroughly with a sharp harrow. As with beings of a higher order, the new race will gradually elbow out the aborigines. If cultivation is the object, the qualities of the soil are greatly improved after plowing, by a top dressing of lime or ashes, to neutralize the acids which have been accumulated during the long submersion: for such soils are literally, as well as in common parlance, *sour*. They are said, however, to produce good crops of oats without such application. The most proper crops are oats, corn, and roots,—especially potatoes and ruta bagas.

Whether marsh meadows are susceptible, after two or three years of cultivation, of being carried through a regular rotation of crops, like the upland, we are not sufficiently informed to say. We know one, which a few years since was grown over with wild grass, scattered tamaracks and clumps of willows, over which, since draining, white clover is spontaneously spreading. We see no reason why red clover might not also be successfully introduced. For wheat they must long be unsuitable, from the excess of vegetable matter; and all kinds of grain would be subject to being laid, as well from too great rankness of growth, as from the lack of silicious matter.

Large Animals.

We have frequent accounts of the great size and weight to which animals attain. We are told of horses 17 hands high, of oxen weighing 2 or 3000 lbs., of hogs of 6 or 800 lbs., when butchered, &c. This is all well enough. But unless considered with regard to the actual profit in rearing such animals, facts of this description are of no consequence whatever to the practical farmer.

If these mammoth specimens can be produced pound for pound, at a less cost than smaller ones, and if they have as much or more hardiness, then are they profitable and desirable. But if the reverse of this is true, they may do for playthings with those who farm it for amusement, and will serve to swell a paragraph for the newspapers; but the judicious farmer who looks only to the greatest profit from his operations, will think twice before he enters upon the race of competition on such points, or makes expensive purchases of such stock.

Two cows that yield as much milk and butter, and at the same time consume as much provender, as three of a smaller size, are not a whit more profitable. A large sheep that shears as much wool, and requires as much keep as two small ones, is just as profitable and no more so, (except some small difference in the labor of shearing,) provided the quality of the fleece and mutton is equal. This is very apparent.

The true test of the comparative profit of domestic animals, is *the production of the greatest amount of profit, from a given amount of feed and labor.*

As a matter of fact, we believe it is generally found that with all kinds, (unless, possibly, sheep may be an exception,) a medium size is productive of the greatest profit. This size is usually accompanied with greater hardiness and power of endurance, and easiness of keep. We have reference, of course, to the size *of the breed*—not so much to greater or less size attained in the same breed by difference of keep; though there is a medium here too.—The animal which has been always continued in a thrifty condition, without being stunted by starvation or exposure on the one hand, nor made tender and of flabby growth by too assiduous stuffing on the other, will yield the most absolute profit, unless designed merely for the knife, in which case the growth can hardly be too rapid.

Manures for Fruit Trees.—No tree appears to be more benefitted by animal manures than the peach tree. We may often observe this when it grows near a barn-yard, so as to reach the manure: that the growth is greater, the leaves greener, and the fruit larger, than when it stands on sterile ground; and even as a general rule, fruit of the same variety is flavored in proportion to its size: the larger, the finer. Urine may be very advantageously applied to this tree, especially while it is small, as well as to young apple trees. It not only hastens their growth, but, by its offensive odor, repels the *borer* from the latter, and the peach-worm (Ægeria) from the former. A small tree will bear a pint once a fortnight, and perhaps more and oftener; for I have never injured any of my trees by this application, and consequently have not ascertained the amount which may be used upon them; certainly large trees will bear much more.—*Am. Quar. Journal.*

Bean and Pea Crops preparatory to Wheat.

Gen. Harmon has five acres in wheat, not far from one half of which was sown after beans, and the other moiety after peas. The field had been cultivated in corn, and was very even as to quality. The seed wheat was sown after the beans, without plowing, and covered with a two-horse cultivator. After the peas the land was plowed once before seeding, and the seed also covered with the cultivator. The wheat growing after the beans is twice as large as that sown on the pea field.

From other experiments and observation, Gen. H. regards a bean better than a pea crop, where wheat is to be sown in autumn.—*Gen. Farmer.*

To Extract Paint or Grease Spots.—Dip a pen in spirits of turpentine, and transfer it to the paint spot, in sufficient quantity to discharge the oil and gluten. Let it stand some hours, then rub it. For large or numerous spots, apply the spirits of turpentine with a sponge if possible, before it becomes dry.—*Brit. Am. Cult.*

☞Treatment of Cows.—When an animal is quiet, the respirations are fewer; less food is consumed in respiration, and the animal, if not milked, fattens. Hence, cows ought never to be driven rapidly to or from pasture. Where a cow is exercised much, the material which would have been converted into butter, is consumed in respiration.—*Prof. Playfair.*

Agricultural Papers.

Now, as to the contents of agricultural papers; whose fault is it if they are not *practical?* Who are the practical men? who are daily conversant with just the things a cultivator most needs to know? who is stumbling upon difficulties, or discovering some escape from them? who is it that knows so much about gardens, orchards, farms, cattle, grains and grasses? Why, the very men *who won't write a word for the paper that they read*, and then complain that there is nothing *practical in it.* Yes there is. There is practical evidence that men are more willing to be helped, than to help others; and, also, that men sometimes blame others for things of which they themselves are chiefly blameworthy.—*West. Farmer & Gard.*

To prevent Horses being teased by Flies.—Take two or three handfuls of walnut leaves, upon which pour 2 or 3 quarts of cold water; let it infuse one night, and pour the whole, next morning, into a kettle, and let it boil for a quarter of an hour; when cold, it will be fit for use. No more is required than to moisten a sponge, and, before the horse goes out of the stable, let those parts which are most irritable be smeared over with the liquor, viz: between, and upon the ears, the neck, the flank, &c. Not only the lady or gentleman who rides out for pleasure, will derive benefit from this preparation, but the coachman, the wagoner, and all others who use horses during the hot months.—*British Am. Cult.*

To restore Tainted Meat.—If salted, wash it and throw away the old brine, then replace it with the following composition, and let it lie in it for a few days: Fresh-burnt charcoal, powdered, 12 parts; common salt, 11 parts; saltpetre, 4 parts. Mix. This must be used the same as common salt; and when you want to cook the meat, the black color may be removed with clean water.—*Brit. Am. Cult.*

Tar for Sheep.—A gentleman, who keeps a large flock of sheep, says that during the season of grazing he gives his sheep *tar*, at the rate of a gill a day for every twenty sheep. He puts the tar in a trough, sprinkles a little find salt over it, and the sheep consume it with eagerness. This preserves them from worms in the head, promotes their general health, and is thought to be a specific against the rot.—*Brit. Am. Cult.*

To Prevent Brass Vessels from Contracting Verdigris.—After being used, instead of wiping them dry, it has been found that by constantly immersing them in water, they are kept perfectly innoxious, and will remain for years fully as clean and nearly as bright as when they first came out of the hands of the workmen.—*Amer. Agricult.*

MICHIGAN FARMER.

JACKSON, JULY, 1846.

New Magazine.

THE HORTICULTURIST; and Journal of Rural art and Rural Taste. By A. J. Downing, Author of "Landscape Gardening," "Designs for Cottage Residences," "Fruits and Fruit Trees of America," etc. etc.

This Magazine will be devoted to Horticulture, Pomology, Landscape Gardening, and Rural Architecture, the latter embracing designs for rural cottages and villas, farm-houses, gates, lodges, hot-houses, vineries, &c. The work will be issued on the first of each month, (commencing July, 1846,) in numbers of 48 pages, printed on fine paper, and embellished with numerous engravings, illustrative of the various subjects to which it is devoted, making an annual volume of about 600 pages, at $3,00 a year, payable in advance.—Published by Luther Tucker, at the office of "The Cultivator," Albany, N. Y., to whom all business letters should be addressed.

The character of both the Publisher and Editor furnish the public a sufficient guaranty that the above publication will be one of high merit. It is, no doubt, destined to do much towards elevating the standard of rural taste, and cultivating a relish for rural embellishments. Every man of means, who has an eye for the beautiful in nature and art, should have the work.

We are indebted to the Hon. Jas. B. Hunt and the Hon. J. H. Johnson for copies of the Report of the Commissioner of Patents.

THE SEASON.—The season continues, on the whole, favorable, especially for the wheat crop. There is now (June 25th) every prospect that the heavy growth on the ground will ripen for an unusually early harvest, without injury.

The dry weather during the past month has approximated to drouth, and spring grain, except corn, has suffered in some sections.

THE MARKET.—The prospect of an abundant harvest in most, if not all the great wheat growing states of the West, together with the loss of any expectation of such a modification of the British tariff as will affect prices advantageously, and other causes, have produced an unfortunate depression in the grain market. So numerous, and so liable to change are the causes which operate, that it seems impossible to foresee, with any certainty, the high or low price of commodities for any considerable period in advance.

WATERING PLANTS.—The London Gardeners' Chronicle cautions against watering plants too frequently, or before they absolutely require it. After the ground has parted with the greater portion of its moisture, and vegetables are upon the point of flagging, then, and not before, is the time for watering; and this, when done, should not be done in driblets, but copiously, so as to penetrate well among the roots. Superficial waterings keep the surface of the soil in a puddle, but never reach the roots. One effectual supply, whether applied to plants in pots, under glass, or in the open ground, is not only of far greater utility, but much more economical than ten partial ones.

SEED PEAS.—To prevent seed peas being infested by bugs, it is recommended, to pour boiling water on them for a minute as soon as gathered. This destroys the insect, while in the larva state, before it has had time to do any other injury than that of rendering the peas unsuitable for the table.

CALICO CORN.—A. W. Townsend, in the Farmers' Cabinet, strongly recommends the above species of corn, especially for culinary purposes. Its most valuable property for this use, and that in which it differs most from other varieties, is in containing a larger proportion of starch and less of oil. Mr. T. says, "The bread of the corn, when mixed and prepared for baking in the same manner as wheat flour, will become light sooner than wheat; and for pies does not stick together as well as wheat flour. In taste, a difference can be discovered. But let a person who has no knowledge of the article make use of the bread, pudding, or pies, which occurred at my own table, and let him be asked of what the article was made, and he would pronounce it wheat—so near does it approach it." "I had 72 or 73 pounds when taken to the mill; and had 30 lbs. of superfine, and 20 of common flour—and 21 lbs. of bran."

HAY MAKING.—Why not adopt the same rule in regard to the time of cutting clover and grass for hay, that is followed in cutting medicinal herbs? The object in both cases is to secure the intrinsic virtues of the plant. In curing herbs, as all acquainted with the subject admit, the most proper time for cutting is when they are in full bloom: and it is also admitted that they should be cured in the shade, because if exposed to the more direct influence of the sun and air, some of their valuable properties would be evaporated.—*Cultivator.*

HEAVES IN HORSES.—A correspondent says, after trying various modes, he has found the following the best treatment for horses having the heaves, viz:—To feed *no* hay, but plenty of *bright*, whole (or uncut) straw, with all the oats they would eat, (the latter soaked in cold water three or four hours,) with a pint of oil-meal [flax seed] daily. On this feed they have worked well, and were troubled but little with the disease.—*Cultivator.*

WHEAT.—The total amount of wheat imported into Great Britain in 1840, from all other countries, was 1,993,405 quarters. Only one twenty-fifth of this amount was sent by the farmers of the United States, though possessing equal advantages as to duty.—*Cultivator.*

The Quince requires constant cultivation to insure thrift and fruit. It loves a deep rich soil, not too dry and sandy.—*Prairie Farmer.*

Manuring by Green Crops.

Suppose land to be in clover; which will most improve the soil, or conduce to the product of the succeeding crops, plowing in the entire growth of clover, or feeding it off with stock?

In regard to this question, we incline to the opinion from evidence derived from experience and observation, and considerable inquiry, that it is better to feed off clover than to plow it in. We believe that the best crops are obtained where the clover is depastured. This subject has been brought up for discussion at several of our agricultural meetings, and the opinion expressed by nearly all farmers who have had practical acquaintance with it, was in agreement with our own. Col. Cost, member of the Assembly from Ontario, and an extensive and judicious farmer, stated that he had practised plowing in clover, and had observed the results thus produced compared with those where it had been fed off, and he gave a decided preference to the latter course. The experience of Gen. Harmon, of Wheatland, well known as one of our most successful wheat-farmers, has also, we are authorized to say, induced him to form the same opinion. He has noticed that his wheat crop is always better where clover has been depastured.

We are not aware of many experiments having been made expressly for the purpose of testing this point, though its importance is such as to render the most careful experiment necessary, and we would suggest this to agricultural societies as one of the subjects to which their attention should be directed.

We recollect having read an account of an experiment made by the late Gen. Harrison, of Ohio. He had a field of clover consisting of several acres—the soil of clayey loam, and of uniform character. He divided it into two parts, one of which was pastured, chiefly with cattle, and on the other the growth of clover was plowed in. In the autumn, the pastured portion was plowed, and both parcels were sown to wheat. The wheat was best on the part which had been pastured, as were also the two succeeding crops, consisting, if we mistake not, of oats and clover.

Various causes are assigned for the effects above mentioned. 1. It is said that by burying in the soil a mass of vegetation while it is filled with sap and juices, a *sourness* is produced which is hurtful to succeeding crops. 2. In some instances where a considerable quantity of clover has been plowed in, its effect is thought to have been to make the soil too "hovery," or "puffy," as it is variously called—that is, it becomes too loose at the bottom of the furrow and the roots of the wheat do not obtain a sufficiently firm hold.

That sourness is actually caused by the fermentation of a large mass of green clover or other vegetation, does not seem improbable. The sap contained in the stalks and leaves may be forced by fermentation into acetic acid, and the sugar and starch be turned to vinegar. Every one may have noticed that a pile of green weeds or green grass, becomes after a time actually *sour*—the acid may be perceived both by smell and taste—and we are unable to see why the same effect should not take place when a heavy crop of clover is turned in with the plow. At all events, the effects of the practice are such that many farmers declare they would prefer having the clover cut and carried off the land rather than that it should be turned in green.

Mr. Vedder, of Geneva, informs us that he formerly plowed in clover, but that he has latterly discontinued the practice. He is of opinion that the chief value is in the root of the plant, and he states that he has obtained better crops where the clover has been cut and the stubble only plowed in, than by plowing in the green tops. Gen. Harrison, also, in explaining the results of the experiment above mentioned, suggests that the principal amelioration of the soil is by the roots. They may produce a favorable effect in several ways. Where the soil is too compact, they make it more friable by dividing and opening it, and the decomposition of the roots themselves furnishes a large amount of matter.

We will suggest another mode also by which the roots improve the soil. It is known that plants exert a *vital* action on the soil. It is by this principle of vitality that they are able to reduce the various substances of which they are formed, into food on which they can subsist. Inexplicable as is this mysterious power, it must be great; for by its exercise the hardest flints and the other mineral elements which enter into the vegetable structure, are perfectly dissolved, are taken up and made to perform their several offices in the tissues. Perhaps no plant is more remarkable for this action than clover. Some idea may be formed of it by observing the effect produced when its roots are brought in contact with rocks or stones. Under this vital energy, through the agency of light, heat, air, and moisture, the solid rock is made to crumble, and gradually to wear away. Now may not this action of the roots tend to bring the earthy matters composing the soil into a state more favorable to the support of other plants? May not the mineral elements be thus rendered more easily soluble and available to other crops?

It may be said that the sourness before spoken of, can be avoided by allowing the clover crop to ripen and die before it is plowed in. This is probably true, and it has been tried in some cases, but still preference has been given to the practice of feeding off the crop. The fact upon the whole seems probable, that there are certain substances, as nitrogenized salts, &c., conveyed to the soil in the dung and urine of animals, whose action is more favorable to fertility than the crude undigested vegetable matter.—*Albany Cultivator.*

Murrain.—The Sangamon Journal contains the following mode of treating this disease among cattle, as practised by Major Washington Iles of that county.

"Last winter the murrain attacked his stock of cattle and several died every day. When the disease raged most fatally, and the prospect seemed to be fair that he would lose his whole stock, he salted his cattle *and mixed with the salt a considerable portion of copperas—not so much, however, as to give the cattle a distaste for the salt.*—The result was that those affected by the disease were immediately cured, and no new case of disease or death occurred thereafter."—*Prairie Farmer.*

For the Michigan Farmer.

Crops in Western Michigan, &c.

ST. JOSEPH, June 12, 1846.

MR. HURLBUT,—

Dear Sir:—Yours of the 8th inst. is before me, and I am happy in reply to your inquiries after our crops, fruits, &c., to give the most flattering answers. The wheat crop far exceeds any I have before witnessed in Michigan, during a residence of twelve years, and is, I think, safe from all but rust, and the present appearance, which is that of drouth, would seem to give promise of escape from that also. Our spring crops, oats in particular, look exceedingly well. Meadows, where we have them, are exceedingly fine also. Fruits,—although in some instances destroyed by the remarkably fine weather immediately previous to the setting in of winter,—peaches in particular—still promise well generally.

While I have pen in hand, permit me to furnish for the Farmer a recipe for the cure of Cholera Morbus. It is simply cider and ashes. Take a common glass of cider, put into it a table spoonful of warm ashes, stir a little, let it settle a moment, but swallow it while in a state of effervescence, if you swallow a little ashes it is no bad medicine; repeat the dose in fifteen minutes, and a third dose will effect the cure. In a case where cider was not to be had I should try a substitute prepared from vinegar and water: this, however, I have never seen tried. In order to carry conviction, if possible, to the minds of your readers, I must be indulged in telling my story—(I claim a good deal of indulgence of this kind you know.)—I picked up the recipe in a newspaper in Western N. Y. about 1816. In a very short time afterwards, I had myself an attack of the disease, and happening, from some cause, to be fully convinced of the efficacy of the recipe, instead of sending for the Doctor, sent to the village where he lived for cider, and obtained immediate relief. Since then, in raising a family of ten children, we have had a number of cases of this disease in which we have applied this remedy with entire success. Still further, in 1832, while keeping a stage-house at Medina, O., the cholera raging in Columbus on the one side, and Cleveland on the other, we were of course apprehensive of its attacks; and surely at length I had myself an attack, which I then thought, and still think, was cholera. We tried the old and faithful remedy, and it carried me triumphantly through. It is proper to remark that in all these cases the remedy has been applied in the incipient stage of the disease; whether it could be equally relied on in the more advanced stages, is more than I can avouch.

It may not perhaps be wholly useless to furnish you also a word in the way of remedy for cramp—a ligature, tied tight about the leg, above or below the knee; the more severe the attack the tighter you must draw the ligature. It used to be said that eelskins applied in this way were efficacious; but I have found that any common ligature is useful. Further—let those subject to cramp have their beds made level and full to the foot-board, so that the feet shall rest as high as the legs. It is to be presumed that most of your readers may know all these things, still probably some do not, and may be benefitted by their publication in the Farmer.

Respectfully,
Your most obedient,
E. M.

Soiling.

Dr. H. A. Field, at a late meeting of the N. Y. Farmer's Club, stated that his method of soiling was as follows: To select a piece of land neither wet nor very dry, and make it rich as possible by manuring. In September, sow rye; double seed it—it will come early in spring; then sow oats, clover, and the common field pea, which will be of a heavy growth. After the rye is off, sow Indian corn broadcast; cut the stalks before it has tasseled. You can have two or more crops of cuttings in a season, by beginning early, and continuing to sow for several weeks in succession. Thus, you can sow rye in September, oats, peas and clover early in spring, and corn in early summer. If this green food should cause diarrhœa, give the cows for a while dry feed. He said that four of his cows soiled in summer after this plan, had yielded about $300 worth of milk the past year, sold to certain hotels in summer, for two and a half cents a quart, and for four cents in winter. Two cows which gave only five quarts daily each, upon being stabled and fed with green feed, produced eleven quarts each.—*American Agriculturist.*

The entire adoption of a system of soiling we do not consider applicable to any portion of Michigan at present; but there are experienced, every season, more or less periods of extreme drouth, during which pastures dry up, and afford but sparing nourishment to domestic animals. The wild feed on the openings cannot every where be relied on; and at the best, it starts late in the spring, and affords comparatively poor feed after about the first of September. A resort, to a greater or less extent, to some of the products recommended in the preceding article, would, we think, be found serviceable to *piece out* the time before and after the wild grass is fit for use, where that is depended on, and to furnish a resource against dried up pastures, where the cultivated grasses have been introduced. This method would apply particularly to the keeping of dairies, and would, it seems to us, obviate every objection to the successful introduction of that branch of husbandry on the openings.

AN ARGUMENT FOR CLEAN TILLAGE.—That period in the growth of plants in which they exercise by far the most exhausting effect upon the soil, is during and immediately before the ripening of the seed. Hence is derived a motive for the timely extirpation of weeds, in addition to the obvious one of avoiding the *inconvenience* of allowing them to propagate and multiply. It is, to prevent the exhaustion of our soils, by the ripening of their pernicious seeds. This is using up the fertility of our lands to the poorest possible purpose.

Seed.

It is of the utmost importance that the seeds of all kinds of plants should have attained to perfect maturity, and should have been carefully and healthily preserved.

Seed which has not reached maturity, may, it is true, possess the power of germinating, but it always retains a disposition to disease and weakness. It is true that disposition may be so far conquered by a coincidence of favorable auspices, and by a soil and temperature, peculiarly adapted to the nature of the plant, that imperfect seeds do occasionally produce vigorous and healthy plants; but there is always great danger of the crop's failing, and the saving which the agriculturist may have effected by using such seed is not commensurate with the risk. I think it the more necessary to lay particular stress upon this point, as Mr. Banks, the great English naturalist, has, in his observations on the causes of corn being laid, stated it to be his opinion that the grain of corn which has been laid is equally good for seed as any other, since it has not lost the power of germinating. This opinion, promulgated by so celebrated a man, which might have spread itself extensively and produced the most baneful effects, was soon contradicted by the experience of numerous agriculturists. Although some agricultural authors may have recommended that the smallest grain should be selected for the purpose of being sown, because then a given measure will contain a greater number of seeds, all practical men who have paid any attention to the subject are not the less convinced of the advantages arising from sowing the largest and most perfect grains; and it frequently happens that by strictly adhering to this plan they have obtained particularly good and very marked results, and a stronger and healthier race of plants have been created, which a little care has afterward been sufficient to preserve. It is this which partly accounts for the advantages which are found to arise from sowing the different kinds of grain procured from abroad, where proper care has been employed in their selection. In choosing the seed, a preference ought to be given to that portion of the grain which has been grown upon a soil favorable to it, and calculated to bring it to perfection; and it is worth while, on more accounts than one, to take the trouble of gathering the seed from a field suited to the plant, and also to pay all possible attention to the harvest by weeding and isolating the plants during their vegetation and hoeing up the earth, and, in short, sparing no care or pains likely to be conducive to the perfecting of the crop. By these means we shall ensure the seed's becoming completely and uniformly matured. But where it is one of the distinctive properties or peculiarities of the plant for the seed to ripen unequally, those ears or pods should be set apart for the purpose of sowing which are perfectly ripe.

The next point of importance is the preserving of the seed or grain intended for sowing. It ought to be carefully kept from damp: not only the moisture inherent in it, but also that portion which it may absorb, should, if possible, be abstracted from it. In order to effect this, it must be spread out to dry, and frequently turned, until the moisture is all evaporated. For as soon as the seed begins to deteriorate, which state is often expressed by saying that it is heated, and which becomes apparent in a very unequivocal manner from the odor which such grain then exhales, its success when sown will be very uncertain. But such seed has not lost the power of germinating: the young plants which shoot from it very frequently look fresh and green; but as they develop themselves, especially when they begin to blossom, they become weak and sickly, and the flowers fall off without fecundation taking place, or, at any rate, when little or no grain is formed. I have had opportunities of witnessing the truth of this statement in a crop of oats produced by grain which had been allowed to become heated. The effect will be more or less striking in proportion to the deterioration of the grain, but it will in all cases be perceptible; and, very frequently, when we attribute the ill success of the crops to other causes, this is the actual one.

Many persons consider a frequent change or renewal of the seed as an indispensable condition to the production of a fine crop. The necessity of this change is insisted on both by theorists and practical men, especially in extensive agricultural undertakings, where the great object is to produce the largest possible amount of matter. But, according to my own conviction, the strength of which has been rather increased than diminished, in proportion as I have acquired new data, the advantage derived from the use of seeds procured from foreign sources arises solely from this cause, viz. that farmers are not in general sufficiently careful in the choice and preservation of the seeds which they have gathered themselves. It may occasionally depend upon locality, or upon the nature of the soil and climate not being favorable to the perfect formation of certain kinds of grain; and, in that case, recourse must be had to seed procured elsewhere. But it more frequently happens that the amount of labor required by the farm or agricultural undertaking does not admit of the farmer's being able to devote the necessary care and attention to the grain intended for seed; hence it is often injudiciously selected,

and suffered to experience fermentation, which deteriorates from its value and healthfulness. In all countries there are some districts and some particular farms which are famous for producing certain kinds of grain, and where the whole harvest is frequently sold for seed at very high prices. In such localities we generally find that this advantage arises not less from the nature and properties of the soil being favorable to the production of one particular kind of grain, than to the infinitely greater care and attention which is paid to the crop; and we shall also find, even among the farmers themselves, a conviction that they owe the reputation their seeds enjoy as much to the latter as to the former circumstance.

In places where one or both of these advantages are not attainable, it may undoubtedly be advantageous to procure the seed elsewhere, even though this can only be done at great expense; but I am by no means an advocate for the absolute necessity of this mode of proceeding, for I am convinced that if the soil be in other respects favorable, any kind of seed which is at first imperfect will gradually improve in quality, and, with care and attention, eventually be rendered perfect.

Persons who maintain that a renewal or change of seed is absolutely necessary, inquire whether it ought to be taken from a richer or poorer, a stronger or lighter soil, and from a milder or colder climate. My reply is, procure it from that place where it is most perfect and healthy. This is not always where the soil is richest, or the climate the mildest; as in such places the corn is often too thick on the ground, and consequently not sufficiently exposed to the influence of air and light to allow the grain to acquire absolute perfection; besides, the seed or grain is often too large, and there is more husk than farina in its component parts, the latter of which is alone capable of affording nutriment to the young plants. In those places, on the other hand, where the soil is so weak that it is incapable of furnishing sufficient nourishment to effect the complete formation of the grain, that grain will be equally improper for the reproduction of other plants; for wheat grown upon a soil which only produces stunted grain will always bear an imperfect seed, and will require to be replaced by seed derived from really good wheat land.

It is a well known fact that, in plants as in animals, strength and weakness, health or disease, are transmitted not only to the first generation, but through several succeeding ones; and that these dispositions can only be gradually eradicated by the help of other influences.

* * * *

Seed wheat of one or two years old is almost universally preferred, as being less liable to disease.

Most agriculturists are of a different opinion as regards rye, and prefer quite new grain; for, when it is more than a year old, they consider it necessary to sow it more thickly than they would in the former case; and, consequently, an equal amount of seed would sow a smaller extent of ground in the former than in the latter case.

Old linseed is far preferable to new.

Clover seed keeps very well for two years; it deteriorates on the third, and becomes quite feeble and incapable of producing plants on the fourth.

As almost all kinds of seed keep at least until the second year, it is always advantageous to have a larger stock in hand than will be required for one year's consumption, especially of autumnal grain, as by this means the farmer is enabled to choose the most favorable period for sowing his land. It must not, however, be understood that we mean to advocate the practice of saving the grain of those years in which the crops have not become properly matured; for then, as has been already stated, it is not fit for seed. But if, when such years occur, the farmer happens to possess a store of seed left from the preceding year, he may consider himself very fortunate.—*Thaer.*

Farm Arrangements.

Mr. Geddes, in his buildings, acts upon a very sound and useful principle, one which combines economy and profit with convenience (if the distinction is proper), namely, that each department of husbandry shall have its house, where all that appertains to it shall be conveniently placed and arranged. I say *arranged*, because that is the true word, meaning that things are not only put in, but classified; so that if you please, you may go in the dark and put your hand upon any article that may be wanted. Thus there is the carriage house, with each harness upon its own peg; there is the tool-house, with each tool in the chest or upon its hook; the poultry being entirely excluded from these premises, which is not always the case in other establishments: the grain-barn, the hay-barn, the sheep, the cows, the hogs, etc. each occupying their own places. The poultry have suitable conveniences for laying and hatching. The milk-room, in particular, is worthy of especial notice: it is a beautiful little building, situated in a triangular place in the yard, leaving space for driving a team with wood or any other load to the door of the wood-house, and but a few feet from the entrance door of the kitchen. It is constructed of cobblestone laid up in mortar, is thirteen feet square, and the

corners are of hewn stone: it is one story high on the side facing the kitchen, has a stone floor, with one room for milk, lighted with two windows, which can of course be darkened by blinds, so as to exclude the flies, and yet allow the room to be aired. Upon the south side, the descent gives room for an ash-house, with its door enclosed in stone. Immediately above the ash-room, which an arched roof, is the smoke-house; the smoke being admitted from the ashery below, through openings in the arched roof. The hams, and other meat designed for smoking, are suspended on hooks on cross-pieces, which are then put in for smoking. The whole arrangement, as you may readily conceive, is such as to ensure perfect safety from fire, and to combine every convenience in each operation. The meat is suffered to remain in its place through the season, as the room is cool, excludes flies, etc. Some other conveniences are connected with this little but neat building, the whole cost of which was only one hundred and fifty dollars.—*American Quarterly Jour.*

Culture of Strawberries in alternate strips.—A still more easy and economical mode [than that of culture in rows,] is that of growing the strawberry in alternate strips.

Early in April, or in August, being provided with a good stock of strong young plants, select a suitable piece of good deep soil. Dig in a heavy coat of stable manure, pulverizing well and raking the top soil. Strike out the rows, three feet apart, with a line. The plants should now be planted along each line, about a foot apart in the row. They will soon send out runners, and these runners should be allowed to take possession of every alternate strip of three feet—the other strip being kept bare by continually destroying all runners upon it, the whole patch being kept free of all weeds. The occupied strip or bed of runners will now give a heavy crop of strawberries, and the open strip of three feet will serve as an alley from which to gather the fruit. After the crop is over, dig and prepare this alley or strip, for the occupancy of the new runners for the next season's crop. The runners from the old strip will now speedily cover the new space allotted to them, and will perhaps require a partial thinning out to have them evenly distributed. As soon as this is the case, say about the middle of August, dig under the whole of the old plants with a light coat of manure. The surface may be then sown with turneps or spinage, which will come off before the next season of fruits.

In this way the strips or beds, occupied by the plants, are reversed every season, and the same plot of ground may thus be continued in a productive state for many years.

Both of the above modes are so superior to the common one of growing them more closely in *beds*, that we shall not give any directions respecting the latter.—*Downing.*

Clarified Butter.—Melt fresh butter by placing it in a vessel set in a water bath, let it settle, and pour off the clear into an earthenware basin or pot, set in cold water, to cool it as quickly as possible, without letting it crystalize. It keeps a long time without becoming rank.—*Cooley's Cyclo. of Prac. Receipts.*

To take the Honey without destroying the Bees.—In the dusk of the evening, when the bees are quietly lodged, approach the hive, and turn it gently over. Having steadily placed it in a small pit, previously dug to receive it, with its bottom upward, cover it with a clean new hive, which has been properly prepared, with a few stick across the inside of it, and rubbed with aromatic herbs. Having carefully adjusted the mouth of each hive to the other, so that no aperture remains between them, take a small stick, and beat gently round the sides of the lower hive for about ten minutes or a quarter of an hour, in which time the bees will leave their cells in the lower hive, ascend, and adhere to the upper one. Then gently lift the new hive, with all its little tenants, and place it on the stand from which the other hive was taken. This should be done some time in the week preceding Midsummer-day, that the bees may have time, before the summer flowers have faded, to lay in a new stock of honey, which they will not fail to do, for their subsistence through winter.—*Ib.*

Apple Sugar.—Express the juice, and add chalk until the whole of the acid is saturated; pour off the clear liquor; then clarify by boiling in a clean pan with some white of egg; skim off the dirt; and lastly evaporate by a gentle heat to a proper consistence. *Remarks.* 1 cwt. of apples yield about 84 lbs. of juice and 12 lbs. of crude sugar.—*Ib.*

Cherry and Peach Leaves Poisonous.—A farmer lately turned his sheep into a lot occupied by some cherry trees, which had sent up shoots from the roots. The sheep partook of the leaves of these shoots, and were soon seen staggering about the lot, and tumbling upon their heads. Many of them died, when their stomachs were found to contain large quantities of these leaves, which abound with prussic acid, fatal alike to man and animals. It should be known, too, that the stones and twigs, as well as the leaves of the peach, contain prussic acid, and are poisonous.—*Ib.*

From the Albany Cultivator

On the Use of Leached Ashes.

MR. EDITOR,—I have just received your April No. of the Cultivator, in which you wish, for the benefit of one of your correspondents, H. C. B., some information on the value of ashes, &c., and call upon "chemists to tell." Not being exactly a chemist myself, yet having *dug* into the science a little, for the purpose of assisting me in my farming operations, I will offer a few remarks.

Wood ashes, as you observe, generally do best on rather light soils; if they are applied in large quantities, either leached or unleached, they have a tendency to bring in the red moss; but upon gravelly soils this may not be detrimental, as they are usually dry and warm enough if there is moss. But upon more moist and close soils, ashes may ultimately prove injurious.

Unleached ashes when first applied to grass, or other crops, are more efficient than leached, owing to the greater amount of alkali, or potash they contain, but I do not think the sowing of unleached ashes upon land the most economical way of using them. If a heavy rainim mediately follows, the potash is mostly washed out and carried off the land, or sinks into the soil beyond the reach of the roots of plants. Common potash is very readily dissolved in about its weight of water. If a farmer wish es to apply unleached ashes to his grass, or grain crops, it would be the better way to mix his ashes quite moist with ground gypsum, and let them remain some time in the heap. The potash of the ashes would decompose the gypsum, and sulphate of potash would be formed. Sulphate of potash is much less soluble than carbonate of potash, as it requires sixteen pounds of water (at the temperature of 60 deg.) to dissolve one pound of sulphate of potash. From this fact, the loss of potash by rains would be likely to be much less, and for clover, cabbages, turnips, radishes, the sulphate is decidedly better than the carbonate of potash.

But I think it a much more economical plan to mix ashes with swamp muck, peat, or decaying vegetable matter from the woods.—All these substances are acid; (decomposing vegetable matters always produce acids;) these acids want neutralizing before the muck, &c., are suitable for most crops, (sorrel excepted.) Frequently swamp muck is saturated with sulphate of iron, or alumina, that has oozed out in the water from higher land. In such cases, the ashes will have the direct effect to neutralize the acidity of the muck, and make it a good manure,

There is, after the usnal process of leaching ashes for soap or potash, a certain quantity of potash left in the ashes, in combination with silex. Dr. Dana says there are 50 lbs of potash in a cord of leached ashes.—Exposure to the air decomposes this, and then another portion of alkali can be extracted by water. This partially explains what you have heard of the Long Island farmers, who "consider the leached ashes as good as the unleached, provided they are not used for some time after being leached." And you further say, "some suppose they attract valuable properties from the atmosphere after coming from the leach-tub. Is it so? and if any, what are the properties acquired?"

In answer to your question, I say yes, it is so, and will explain it.

If a quantity of leached ashes are piled up under cover of a shed exposed to the air, another portion of alkali will be set free by the decomposition of the silex, as before stated, and the alkali has a strong affinity for nitric acid. The air we breathe is mostly composed of nitrogen 79 parts, and 21 parts of oxygen; in these proportions, these two gases are mechanically combined. But by well known chemical laws, these two gases chemically combine in several different proportions, and form very different substances from common air. In one of their chemical combinations, they unite in the proportions of 14 parts nitrogen and 40 parts oxygen, and in these proportions it is nitric acid, and mixed with a certain quantity of water, it becomes *hydro*-nitric acid, or aquafortis. If common pot or pearl-ash is dissolved in aquafortis, and the liquid evaporated, the result will be nitre or saltpetre. But this is an artificial way of making saltpetre—and expensive, too.

Nature takes a somewhat different method As before stated, the alkali in the leached ashes, has a strong affinity for nitric acid, and so strong is that affinity, or attraction, that the nitrogen and oxygen of the atmosphere, will, *very accommodatingly*, chemically combine in the *right* proportions to form nitric acid, which readily unites with the alkali, and forms nitre or saltpetre—naturally, and cheap too. The longer the ashes are kept, and occasionally moistened and shovelled over, the greater the accumulation of nitre. But if the ashes are occasionally wet with urine, drainings from the manure heap, or mixed with night-soil, or decaying animal matter—substances all rich in nitrogen—the process will be much hastened, and the accumulation of nitre much greater in a given time. Perhaps twelve months would be a proper time for the ashes to remain.

A similar process is going on under all houses and other buildings; the potash in the felspar and mica of our soils, is being slowly but continually dissolving, and as there is also a continual ascent of water, by evaporation,

each particle of water as it ascends, brings with it its particle of potash, which is returned in the dry surface soil, which combines with the nitric acid. And there are frequently large accumulations of nitre under old buildings. In some parts of the East Indies, where it seldom or never rains, nitre accumulates (as under buildings here,) in such quantities that the soil is shoveled up and leached, as we do ashes, and boiled down to nitre.

Nitrate of lime is formed in vast quantities in the lime caverns of Kentucky. And the dry plains in the province of Arica in Peru, are covered with an incrustation of nitrate of soda.

Every body knows, or ought to know, that saltpetre is a good manure—though perhaps they do not all know why it is so. Possibly I may continue the subject, but my sheet is full at this time.

Warner, N. H., April 20, 1846. L. B.

Properties of Heat.

Different substances and surfaces *radiate* heat very differently. Light and porous bodies usually throw it off from themselves, much more rapidly than heavy and compact ones; and smooth and polished surfaces more rapidly than rough surfaces. Hence the heat thrown off from a large fire of burning wood and charcoal,—porous substances—burns the face more than the heat from a metalic stove, not a porous substance. Polished metals radiate very slowly; hence water will remain hot much longer in a tea-pot, kept bright and polished by the neat housewife, than in the tarnished tea-pot of the careless one. For the same reason, pipes for carrying heat by hot water or hot air furnaces, should be bright, in order that none may be wasted on the way, till it reaches the place of destination. Hence also, the reason why stove pipes and drums made of polished Russia iron, do not throw off so much heat as iron whose surface is rough, or rendered porous by blacking.

Substances radiating freely, absorb also freely; and those radiating little, absorb little. Hence the reason that a polished tin plate, placed under a hot stove, or beside it against a wooden wall, remains cold, and protects the wood. Hence also, as every cook knows, a bright baking tin will not absorb the heat and burn the bread as a blackened one will; and indeed it often prevents the proper degree of baking, which is at once obviated by giving it a slight coating in the smoke of a lamp. A new tin boiler, over a clear and hot charcoal fire, failed to boil water at all; the reason being suspected, a few shavings of pine were thrown in to smoke the surface,—when the water soon boiled rapidly. Hence the utility of the thin coating of soot which forms on the bottom of boilers.

Boiling water, (in all ordinary cases,) being always at 212 degrees Fahr., it is obvious that a pot of potatoes will cook just as fast when boiling slowly as when boiling very fast; hence the notion of cooking a boiled dinner faster by a very hot fire, is founded in error, and only wastes fuel. The great amount of latent heat carried off by steam, renders it important to keep boiling vessels closed by metal covers, which condense steam, and return in part the latent heat. Covering newly baked bread, by a cloth, condenses the rising steam in the same way, and keeps the crust soft. It is the amount of heat required for evaporating water, though by the slow process at common temperatures, that occasions the cooling process of sprinkling rooms in hot weather.—*Cultivator.*

Superior Mode of Curing Hams.—Agreeably to your request, I herewith send you the process of curing the hams I sent you in March, which recently called forth the admiration of the American Agricultural Association, and the Farmers Club at New York.

I made a pickle of two quarts of salt, to which I added one ounce of summer savory, one ditto sweet marjoram, one ditto allspice, half ditto saltpetre, and one pound brown sugar; boiled the whole together, and applied the mixture boiling hot, to one hundred pounds of ham, and kept it in the pickle three or four weeks.

My process of smoking was not the most expensive, but may not be the less available on that account. I smoked the hams in a seed-cask, with one head in it, with a small hole for the smoke to pass out, hung my hams to the head, and used about a peck of mahogany saw dust for fuel, which I happened to have on hand for packing goods. I smoked them but one week.

Wm. Stickney.

—*Amer. Agriculturist.*

To Cure Galls in Horses.—W. B. Hamilton, of Philadelphia, says: "Some twenty five years since, an old stage-driver told me the secret why, to the astonishment and envy of every other Jehu, his horses were never galled. Myself and friends have tested it again and again. Here it is. Gather a quantity of smart weed *(aqua piper,)* which grows in almost every wet spot; bruise it well and put it in an iron vessel; cover it with chamber-ley, and wash the galled places whenever the horse enters or leaves the stable, or oftener, and the cure is almost immediate.—If badly galled under the harness or collar, buise well some of the leaves and bind on the spot."—*Cult.*

Origin and growth of Fungi.

The common theory is that fungi, and parasitic plants spring from seeds or sporules, which vegetate on bodies that are adapted to their growth. A writer in the *Gardener's Chronicle*, takes a different view of the matter. It reasons thus :—

"In the mineral kingdom we find that metals in crystalizing assume frequently an arborescent form. The same thing may be observed in water crystalizing into frost, on the panes of windows. When a small quantity of paste is allowed to stand for a few days till it begins to undergo decomposition, it becomes covered with a multitude of white fibres or threads shooting upwards into the air, having all the appearance of a vegetable production."

He then goes on to argue that this vegetable-like substance grows up in paste, "even when excluded from the direct action of the atmosphere," although "the previous process of boiling and preparing the paste was sufficient to destroy any ordinary power of germination which a seed or sporule in it might possess." In consideration of these circumstances, therefore, the writer suggests that fungi may originate in accordance with a law, which, when organized bodies cease to exist in one form are by certain influences impelled into other forms. To use his own language—"it would appear, that whenever a plant becomes diseased, or its juices unnaturally expelled by atmospheric or other causes, the law now indicated might send up part of these exudations in a shape resembling fungi, and that the new vegetable thus produced, appearing almost at the same instant with the disease which gave birth to it, might, by some, be considered as a new being arising from a seed or sporule, instead of its being merely an extension of the existing vegetable in a new form."—*Cult.*

Milk Souring in Thunder Storms.—We have heard great complaints from dairy women about their milk getting sour during a thunder storm, although perfectly sweet a short time previous. The following plans will in a great degree prevent this : All the pans containing milk ought to be placed upon non-conductors of electricity, such as blocks of baked wood, pieces of glass, or wood that has been well painted or varnished. These are articles most easily provided. Beeswax, feathers, and woolen cloths, are also non-conductors, but inconvenient to be used. All these articles will insulate the pans and prevent the electric fluid from entering, which is the cause of acidity, or is in fact the principle of acidity itself.—*Ex.*

Chimnies.—Instead of plastering the inside of chimnies in the usual way, take mortar made with one peck of salt to each bushel of lime, adding as much sand and loam as will render it fit to work, and then lay on a thick coat. If the chimney has no offsets for the soot to lodge on, it will continue perfectly clean, and free from all danger of taking fire. A trial of three years warrants this assertion.—*Ex. Paper.*

☞ Gypsum may be entirely dispensed with where marl is used.—*Am. Quar. Journal.*

Detroit Market, June 25th.

Flour, $2,87 to $2,90 ; Wheat, 60 cts.; Wool, 16 to 25 cts.

ALBANY AGRICULTURAL WAREHOUSE & SEED STORE.

NO. 23 DEAN STREET, ALBANY, N. Y.

THE proprietors of the above establishment desire to call the attention of farmers and merchants in Michigan and other Western states, to their stock of seeds, comprising every variety from the best American and European growers, making an assortment equal to any in this country. Many of our seeds are imported, and all are warranted genuine.

The stock of implements is extensive, embracing the most recent improvements in every department. We keep the "Centre Draft," "Worcester" and "Diamond" plows of all sizes, finished in the best manner.

"Lewis' Seed Planter," the most perfect one yet invented, is made and sold by us. It will plant at any required distance, Turneps, and all small seeds, Beet, Carrot, Tobacco, Cotton, Corn, Beans, Peas, and in short all kinds of seeds. Orders for any of the above articles in any quantity will be promptly filled, and shipments made as directed.

E. COMSTOCK & CO.

Albany, May 12, 1846.

HUNT'S REVOLVING HORSE-RAKE.

HAVING purchased the right of making the above Horse rake for Jackson County, with the exception of two towns, (Grass Lake & E. Portage,) I am prepared to furnish rakes to order. They may be found at the store of Sumner & Bennett, in the village of Jackson, about the middle of June. All orders given Sumner & Bennett, or the subscriber will be attended to

WESLEY W. LAVERTY.

Jackson, May 28, 1846.

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MICHIGAN FARMER.

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During the ensuing year, all subscriptions will commence with the volume. The price of a single copy is fifty cents. To clubs, a reduction is made, namely, five copies for $2, eight copies for $3 ; and in this proportion for any larger number. No reduction allowed unless payment be made in advance.

To former subscribers, and to all others who may be vouched for by any resident agent, the paper will be sent on a credit till October next. To all demands remaining unpaid on the 1st of January next, an addition of 25 per cent. will be made.

ADVERTISEMENTS

Of agricultural implements, farms for sale, &c., would be inserted on our last page at $1,75 per folio, for 3 months, or 75 cents for the first insertion, and 50 cents for each continuance. As the circulation of the Farmer is now probably greater than that of any other paper in the State, and as the number of advertisements is very limited, it is evidently a highly advantageous medium for advertising.